

AMENDMENTS TO THE CLAIMS

Please cancel, without prejudice, claims 4, 12, 13, 17-20, 23, 28, 34, and 46-57; amend claims 1, 5, 7, 11, 22, 24, 27, 29, 32, 35, 38, 40, and 44; and add new claims 58-62, as indicated below in the listing of claims.

Listing of claims:

1. (Currently Amended) A mop comprising:
 - an elongate shaft having a cleaning end and an operator end;
 - a channel body disposed at said cleaning end of said shaft and comprising spaced-apart first and second leg portions defining a channel therebetween;
 - a mop element, said mop element being disposed in a relatively hinged relationship with respect to said channel body along a hinge axis, ~~said hinge axis being generally perpendicular to said central axis~~, said mop element comprising a liquid absorbent member and a mounting element that supports said absorbent member, said mop element having a central axis, said hinge axis being generally perpendicular to said central axis, said central axis dividing said absorbent member into first and second portions, said mounting element including a first support portion and a second support portion, said first support portion connected to said first portion of said absorbent member, and said second support portion connected to said second portion of said absorbent member, and said mounting element including a member connecting said first and second support portions, said member being flexible relative to said first and second support portions; ~~and~~
 - an actuator link connected to one of said mop element and said channel body, whereby movement of said actuator link relative to the other of said mop element and said channel body in a wringing direction causes relative hinged movement of said mop element and said channel body about said hinge axis, thereby drawing said mop element into said channel and causing said first and second portions of said mop element to fold toward each other about said central axis and to become compressed between said leg portions of said channel body; and

a mop element support including a first wing and a second wing;

wherein said first support portion of said mounting element is mounted to said first wing of said mop element support, and said second support portion of said mounting element is mounted to said second wing of said mop element support, and wherein at least one of said first and second wings includes an inclined cam surface, said inclined cam surface having an inner end and an outer end, said outer end closer to said operator end of said shaft than said inner end, said inner end being relatively proximal said central axis of said absorbent member and said surface increasing in inclination from said inner end to said outer end, said cam surface engaging a portion of said channel body as said wings are drawn into said channel body.

2. (Original) The mop according to claim 1, further comprising:

an operator handle, said operator handle being movably mounted to said shaft, said actuator link connected to said operator handle, said operator handle including a gripping portion, whereby movement of said gripping portion in an actuating direction relative to said shaft causes said actuator link to move in said wringing direction.

3. (Original) The mop of claim 2 wherein said operator handle includes a pivotal mounting on said shaft and a pivotal connection to a portion of said actuator link proximal said operator end.

Claim 4 (Cancelled).

5. (Currently Amended) The mop according to claim 4 1, wherein said mop element support includes biasing means urging said wings apart.

6. (Original) The mop according to claim 5, further comprising a stop restricting the biasing of said wings to a generally aligned position.

7. (Currently Amended) The mop according to claim 4 1, wherein said mop element support includes a clasp disposed between said first wing and said second wing, said wings being hingedly connected to said clasp.

8. (Original) The mop according to claim 7, wherein said clasp has a first arm and a second arm, said first wing being hingedly connected to said clasp at said first arm and said second wing being hingedly connected to said clasp at second arm.

9. (Original) The mop according to claim 8, wherein said clasp has a third arm hingedly connected to said channel body at said hinge axis.

10. (Original) The mop according to claim 7, said clasp including a bent portion defining a notch, said actuator link including a distal end, said distal end of said actuator link having a hook disposed in said notch.

11. (Currently Amended) The mop according to claim 4 1, wherein said first leg portion includes a first roller rotatably mounted thereon and engaging said first wing, and said second ~~channel body~~ leg portion including includes a second roller rotatably mounted thereon and engaging said second wing, whereby said relative hinged movement of said mop element and said channel body causes said wings to engage said rollers as said wings are drawn into said channel body.

Claims 12 and 13 (Cancelled).

14. (Original) The mop according to claim 1, wherein said channel body has a body portion which connects said first and second leg portions.

15. (Original) The mop according to claim 14, wherein said actuating link extends through said body portion.

16. (Original) The mop according to claim 14, wherein said actuating link extends around said body portion.

Claims 17-20 (Cancelled).

21. (Original) The mop according to claim 1, wherein said mop element includes a second member connecting said first and second support portions, said second member being flexible relative to said first and second support portions.

22. (Currently Amended) An elongate mop element comprising:
a compressible, elongate liquid absorbent member, said absorbent member having a first portion and a second portion; and
a mounting element, said liquid absorbent member connected to said mounting element, said mounting element including a first support portion and a second support portion, said first support portion connected to said first portion of said absorbent member, and said second support portion connected to said second portion of said absorbent member, and said mounting element including a member connecting said first and second support portions, said member being relatively more flexible than said first support portion and said second support portion; and
a scrubber member, said scrubber member comprising a material that is abrasive relative to said liquid absorbent member, said scrubber member being attached to said mounting element.

Claim 23 (Cancelled).

24. (Currently Amended) The mop element according to ~~23~~ 22, wherein said first support portion includes a flange which defines a flange portion, said scrubber member connected to said flange portion.

25. (Original) The mop element according to claim 24, said flange being resilient and allowing flexure between said flange portion and said support portion.

26. (Original) The mop element according to claim 24, wherein said second support portion includes a flange which defines a flange portion, said second flange portion having a second scrubber member connected thereto.

27. (Currently Amended) A mop comprising:

an elongate shaft having a cleaning end and an operator end;

a mop element disposed at said cleaning end of said shaft, said mop element comprising a compressible, elongate liquid absorbent member having a central axis, said central axis dividing said absorbent member into first and second portions; and

a wringing mechanism connected to said shaft and said mop element, said wringing mechanism operable to compress said liquid absorbent member about said central axis to expel liquid therefrom; ~~and~~

wherein said mop element comprises a mounting element, said mounting element supporting said liquid absorbent member, said mounting element mounted to said wringing mechanism, said mounting element including a first support portion and a second support portion, said first support portion connected to said first portion of said absorbent member, and said second support portion connected to said second portion of said absorbent member, and said mounting element including a flexible member connecting said first and second support portions; and

wherein said mop element comprises a scrubber member, said scrubber member comprising a material that is abrasive relative to said liquid absorbent member, said scrubber member attached to said mounting element.

Claim 28 (Cancelled).

29. (Currently Amended) The mop according to claim ~~28~~ 27, wherein said first support portion includes a flange which defines a flange portion, said scrubber member connected to said flange portion,

30. (Original) The mop according to claim 29, said flange being resilient and allowing flexure between said flange portion and said support portion.

31. (Original) The mop element according to claim 29, wherein said second support portion includes a flange which defines a flange portion, said second flange portion having a second scrubber member connected thereto.

32. (Currently Amended) A mop comprising:

an elongate shaft having a cleaning end and an operator end;

a mop element comprising a compressible, elongate liquid absorbent member having a central axis and a scrubber member, said scrubber member comprising a material that is abrasive relative to said liquid absorbent member; and

an actuator link, whereby movement of said actuator link in a wringing direction causes folding of said mop element about said central axis and compression of said mop element;

wherein said central axis divides said absorbent member into first and second portions, and said mop element comprises a mounting element, said liquid absorbent member and said scrubber member attached to said mounting element, said mounting element including a first support portion and a second support portion, said first support portion connected to said first portion of said absorbent member, and said second support portion connected to said second portion of said absorbent member.

33. (Original) The mop according to 32, wherein said mop element is disposed in a relatively hinged relationship with respect to a channel body along a hinge axis, said hinge axis being generally perpendicular to said central axis, wherein movement of said actuating link in said wringing direction causes relative hinged movement of said mop element and said channel body about said hinge axis.

Claim 34 (Cancelled).

35. (Currently Amended) The mop according to 34 32, wherein said mounting element includes a flexible member connecting said first and second support portions.

36. (Original) The mop according to claim 35, wherein said mounting element includes a second flexible member connecting said first and second support portion.

37. (Original) The mop according to claim 36, wherein said first support portion includes a flange which defines a flange portion, said scrubber member connected to said flange portion.

38. (Currently Amended) The mop according to claim 37, said flange being resilient and allowing flexure between said flange portion and said support ~~position~~ portion.

39. (Original) The mop according to claim 37, wherein said second support portion includes a flange which defines a flange portion, said second flange portion having a second scrubber member connected thereto.

40. (Currently Amended) A mop comprising:
an elongate shaft having a cleaning end and an operator end;
a mop element disposed at said cleaning end of said shaft, said mop element having a central axis and a compressible, elongate liquid absorbent member, said central axis dividing said absorbent member into first and second portions;
a wringing mechanism connected to said shaft and said mop element, said wringing mechanism operable to compress said liquid absorbent member about said central axis to expel liquid therefrom, said wringing mechanism further comprising a mop element support including a first wing connected to said first portion of said absorbent member and a second wing connected to said second portion of said absorbent member; and
a fastener for securing said mop element to said wringing mechanism, said fastener comprising an operator gripping portion, ~~and~~ a shaft extending through an aperture in said first wing of said mop element support, and ~~comprising~~ a plurality of barbs, said fastener retentively engaging said first portion of said ~~mop element~~ absorbent member.

41. (Original) The mop according to claim 40, wherein said shaft of said fastener extends along a longitudinal axis, and said plurality of barbs comprises a first set of barbs and a second set of barbs, said first set of barbs being disposed in an axially spaced relationship with each other and aligned with each other along said longitudinal axis, said second set of barbs being disposed in a longitudinal spaced relationship with each other and aligned with each other along said longitudinal axis, said first and second sets of barbs being respectively circumferentially offset.

42. (Original) The mop according to claim 41, wherein said plurality of barbs comprises a third set of barbs and a fourth set of barbs, said third set of barbs being disposed in an axially spaced relationship with each other and aligned with each other along said longitudinal axis, said fourth set of barbs being disposed in an axially spaced relationship with each other and aligned with each other along said longitudinal axis, said first, second, third, and fourth set of barbs each being respectively circumferentially offset.

43. (Original) The mop according to claim 42, wherein said first set of barbs opposes said third set of barbs, and said second set of barbs opposes said fourth set of barbs.

44. (Currently Amended) The mop according to claim 41, said first and second sets of barbs each being evenly spaced and axially offset from one another thereby defining at least one internal thread, said first wing including an external thread permitting coupling with said internal thread.

45. (Original) The mop according to claim 44, said fastener including third and fourth sets of barbs.

Claims 46-57 (Cancelled).

58. (New) A mop comprising:

an elongate shaft having a cleaning end and an operator end;

a channel body disposed at said cleaning end of said shaft and comprising spaced-apart first and second leg portions defining a channel therebetween;

a mop element, said mop element being disposed in a relatively hinged relationship with respect to said channel body along a hinge axis, said mop element comprising a liquid absorbent member and a mounting element that supports said absorbent member, said mop element having a central axis, said hinge axis being generally perpendicular to said central axis, said central axis dividing said absorbent member into first and second portions, said mounting element including a first support portion and a second support portion, said first support portion connected to said first portion of said absorbent member, and said second support portion connected to said second portion of said absorbent member, and said mounting element including a member connecting said first and second support portions, said member being flexible relative to said first and second support portions;

an actuator link connected to one of said mop element and said channel body, whereby movement of said actuator link relative to the other of said mop element and said channel body in a wringing direction causes relative hinged movement of said mop element and said channel body about said hinge axis, thereby drawing said mop element into said channel and causing said first and second portions of said mop element to fold toward each other about said central axis and to become compressed between said leg portions of said channel body;

a mop element support including a first wing and a second wing;

wherein said first support portion of said mounting element is mounted to said first wing of said mop element support, and said second support portion of said mounting element is mounted to said second wing of said mop element support, wherein said first and second wings each includes a pair of outer corners, and wherein said first and second support portions of said mounting element each includes a pair of outer corner sleeves, said corner sleeves of said first support portion respectively receiving at least a portion of said

outer corners of said first wing, and said corner sleeves of said second support portion respectively receiving at least a portion of said outer corners of said second wing.

59. (New) A mop comprising:

an elongate shaft having a cleaning end and an operator end;

a channel body disposed at said cleaning end of said shaft and comprising spaced-apart first and second leg portions defining a channel therebetween;

a mop element, said mop element being disposed in a relatively hinged relationship with respect to said channel body along a hinge axis, said mop element comprising a liquid absorbent member and a mounting element that supports said absorbent member, said mop element having a central axis, said hinge axis being generally perpendicular to said central axis, said central axis dividing said absorbent member into first and second portions, said mounting element including a first support portion and a second support portion, said first support portion connected to said first portion of said absorbent member, and said second support portion connected to said second portion of said absorbent member, and said mounting element including a member connecting said first and second support portions, said member being flexible relative to said first and second support portions, wherein said mop element comprises a scrubber member, said scrubber member comprising a material that is abrasive relative to said liquid absorbent member, said scrubber member attached to said mounting element; and

an actuator link connected to one of said mop element and said channel body, whereby movement of said actuator link relative to the other of said mop element and said channel body in a wringing direction causes relative hinged movement of said mop element and said channel body about said hinge axis, thereby drawing said mop element into said channel and causing said first and second portions of said mop element to fold toward each other about said central axis and to become compressed between said leg portions of said channel body.

60. (New) The mop according to claim 59, wherein said first support portion includes a flange which defines a flange portion, said scrubber member connected to said flange portion.

61. (New) The mop according to claim 60, said flange being resilient and allowing flexure between said flange portion and said support portion.

62. (New) The mop according to claim 60 wherein said second support portion includes a flange which defines a flange portion, said second flange portion having a second scrubber member connected thereto.